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ABSTRACT

This paper discusses the lack of effective assessment of student learning in graduate programs and presents the results of a case study designed to improve the assessment of graduate student learning at North Dakota State University (NDSU). Graduate faculty in several departments at NDSU decided to adapt Primary Traits Analysis (PTA) to graduate tasks in their master's and doctoral programs. PTA involves identifying the essential characteristics of successfully completed tasks or projects. Faculty began by specifying three to six student outcomes for each graduate program at each degree level. Departments then developed check sheets for use by faculty in assessing student performance on traits identified for the task. The faculty involved have concluded that PTA can be adapted for use by graduate faculty and that evidence for student assessment can be gathered that goes beyond "pass" and is useful in improvement efforts. (Contains 13 references.) (MDM)

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Assessment of Student Learning in Graduate Programs

Grades of at least "B," "pass" on comprehensive exams, and "satisfactory" on the thesis or dissertation are traditional hallmarks of graduate education. The students who receive a graduate degree have successfully "passed" all the tasks in the program.

A review of the literature indicates little has been presented at professional meetings or published about the assessment of learning by graduate students. In their review, Kaylor and Johnson (1994) observed that graduate and professional education are seldom addressed in discussions of outcomes assessment. Examination of assessment plans and reports reveals some disturbing tales about what is going on.

The following statement is from the assessment plan of a prestigious midwestern university which shall remain unnamed, "The goal of assessment of graduate student learning in 1994 was to evaluate the services and staff of the graduate office. Students were asked to respond to a ten-item questionnaire in which a rating was given to such matters as the courtesy, promptness, and knowledge of the staff, and the quality and usefulness of printed materials." Another example, "The knowledge and skills of graduate students are assessed continuously and include standards of admission, retention, and graduation . . ." What does this tell you about the academic achievement of students in the program when the emphasis is on IMPROVING student learning?

When the goal of assessment is to improve student learning, data that students successfully completed the requirements (thesis, oral seminar, defense, etc.) do not provide evidence to identify areas of program strength or areas where the program and

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learning could be improved. Faculty in graduate programs agree that they "know it when they see it," and use their expertise and experience to judge appropriate graduate level performance. There is little attention paid to student outcomes (Conrad & Egan, 1990).

Efforts to assist graduate faculty in re-examining their practices in graduate education have met with only modest success. Getting beyond the notion that since the student successfully completed all the requirements for the degree "the learning is assured," to gathering data relative to what was actually learned is progressing slowly. While alumni surveys, exit interviews of student satisfaction with the program, and other indirect measures provide useful information, they do not provide the direct evidence of what was learned and what was not learned so well. Graduate faculty, assessment directors, and AIR professionals with assessment responsibilities are searching for ways to use the activities of graduate programs for more direct assessment of learning.

When graduate faculty are approached with the question, "Do **all** graduate students do **equally well** on all aspects of the graduate program?" their response is, "**No**." Thus the intent is to find ways acceptable to graduate faculty to gather such evidence. One computer science professor described it this way, "How do we know whether the students are actually learning what we want them to learn?"

The traditional judgment about students' progress by the professor is not what this is about. Professors will continue to use various means, such as projects, papers, examinations, and the like, to "grade" students' progress through the program. Grades in courses, for example, do not provide the answers. The assumption is made that students who get A's have learned more than students who get C's but there is no evidence of precisely what either group learned well or less well. Whatever the assessment method used, it must give the department the ability to diagnose program/student strengths and weaknesses so that constructive improvement measures can be devised where needed. Every method used should provide evidence of outcome attainment including specific areas of effective or ineffective performance. Evidence is

needed of learning in relation to the outcomes; evidence of achievement **across** students to improve programs and learning.

A case study reporting the results of faculty efforts at North Dakota State University (NDSU) to use the traditional activities of graduate programs is reported. Briefly, NDSU has about 9500 students. There are about 550 graduate students enrolled in 40 master's programs and 18 Ph.D. programs.

The Method

Graduate faculty in several departments at NDSU decided to adapt Primary Traits Scoring analysis to graduate tasks in their master's and doctoral programs.

Primary Traits Analysis comes originally from the scoring of written papers by English teachers. (A list of references on the technique and its uses is provided.) The technique was first used on a large scale by the National Assessment of Educational Progress in 1974. The purpose was to provide information about what students know and can do.

Primary Traits Analysis involves identifying the essential characteristics of a successfully completed task or product. What traits or characteristics are inherent in the task or product? It involves the faculty making explicit the things they look for in the comprehensive exam responses, the research proposal, the oral seminar presentation, the thesis, or the oral defense. The criteria being used are explicitly stated. For example, what constitutes a thesis that "passes"? Traits are the things the faculty care about.

Faculty began by specifying three to six student learning outcomes for each graduate program at each degree level. Faculty recognized that the Graduate School's forms for program completion were too global to be useful in providing evidence of attainment of the outcomes. They wanted to retain the traditional activities of graduate programs, only make them more useful for improvement.

Primary traits analysis was already being tried in some undergraduate programs so they decided to try it with graduate program activities. The faculty had already agreed they "knew it when they saw it" so they began by identifying the important characteristics, or traits, of successfully completed tasks, such as the review of literature, the oral seminar, the thesis or dissertation, and the final oral defense.

Results

The departments have developed check sheets for use by faculty in assessing student performance on the traits identified for the task. Usually a three-level rating scale is used. Student performance is then rated on the various tasks. It takes very little additional time of the faculty. The Graduate School receives the "pass" or "satisfactory" it requires. The department accumulates the data across students to identify areas of strength and areas where learning may need improvement, although each individual student may have performed well enough to "pass."

The Zoology faculty have identified a further concern from their use of primary traits analysis on the final oral defense.

Conclusion

The faculty's purpose was to find a feasible way to use the usual tasks in graduate programs to gather evidence of student learning in order to improve that learning. They have concluded that Primary Traits Analysis can be adapted for use by graduate faculty. Evidence can be gathered that goes beyond "pass" and is useful in improvement efforts. A concern remains with the problems of having only a small number of program completers in some master's and doctoral programs.

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